M/V Cosco Busan:

Incident Overview &
Incident Specific Preparedness Review

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National Oceanic & Atmospheric Administration

Many slides ~~stolen~~ borrowed from:
Jordan Stout, Ed Owens and others

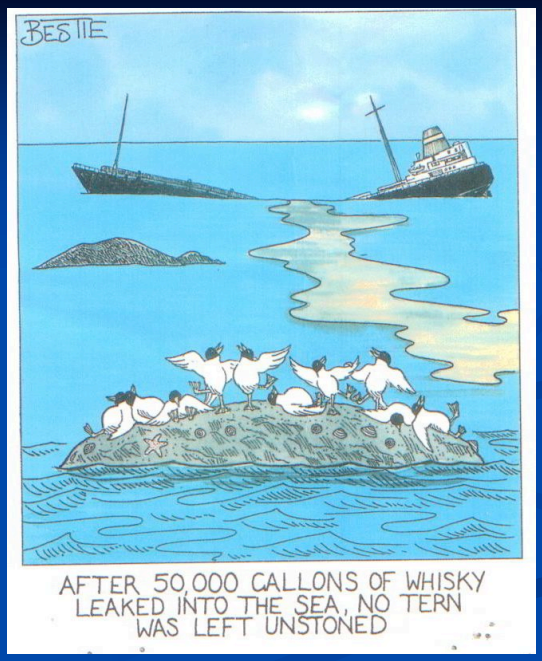

Roger Medcalf

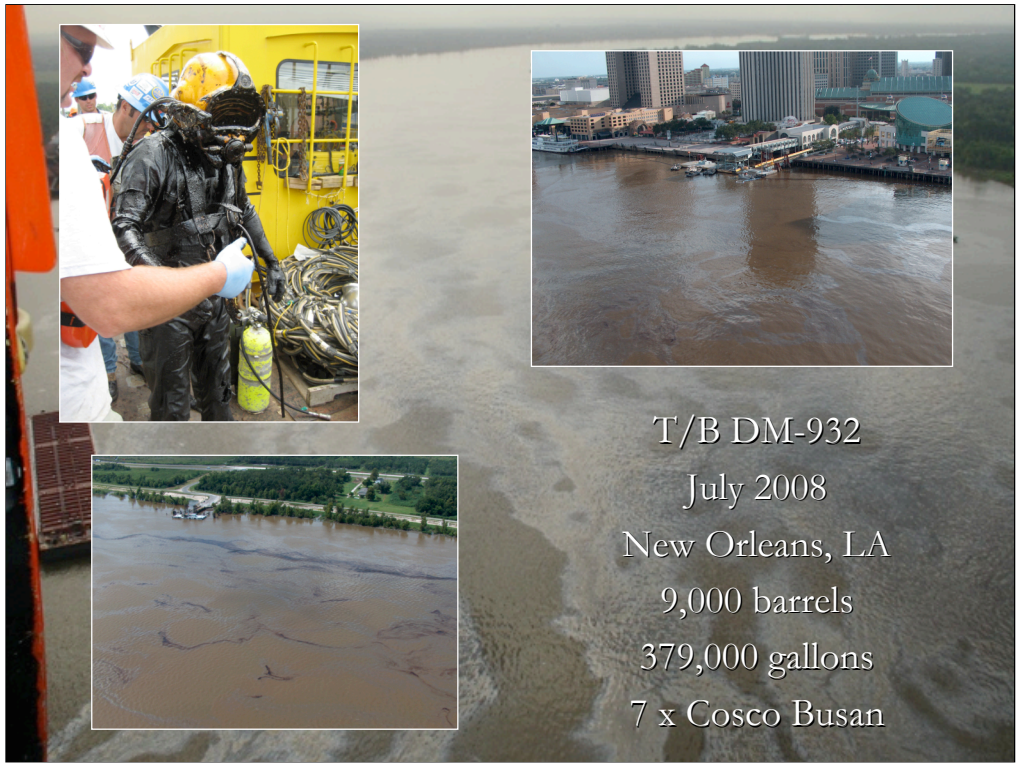
Perspective…

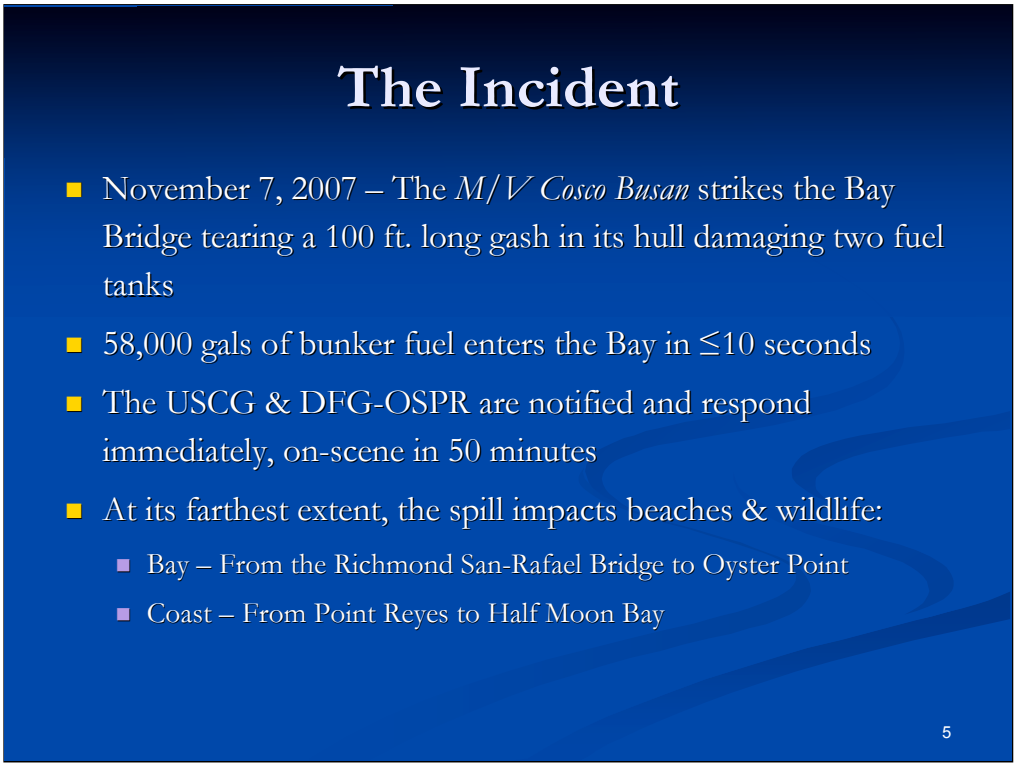
- What was spilled?
- How much?
- What will it hit?

& when it hits something…

- Why do we care?




T/B DM-932
July 2008
New Orleans, LA
9,000 barrels
379,000 gallons
7 x Cosco Busan



• Be prepared to explain why "respond immediately" = "on scene in 50 minutes". Chronology of initial response is below, and chronology is attached for reference.

•Conditions: heavy fog reduced visibility to just 300 ft. We knew oil was there but couldn't see how much or how far it had traveled away from the vessel.

•Unable to launch recon aerial units until ~8 hrs. after incident due to bad weather.

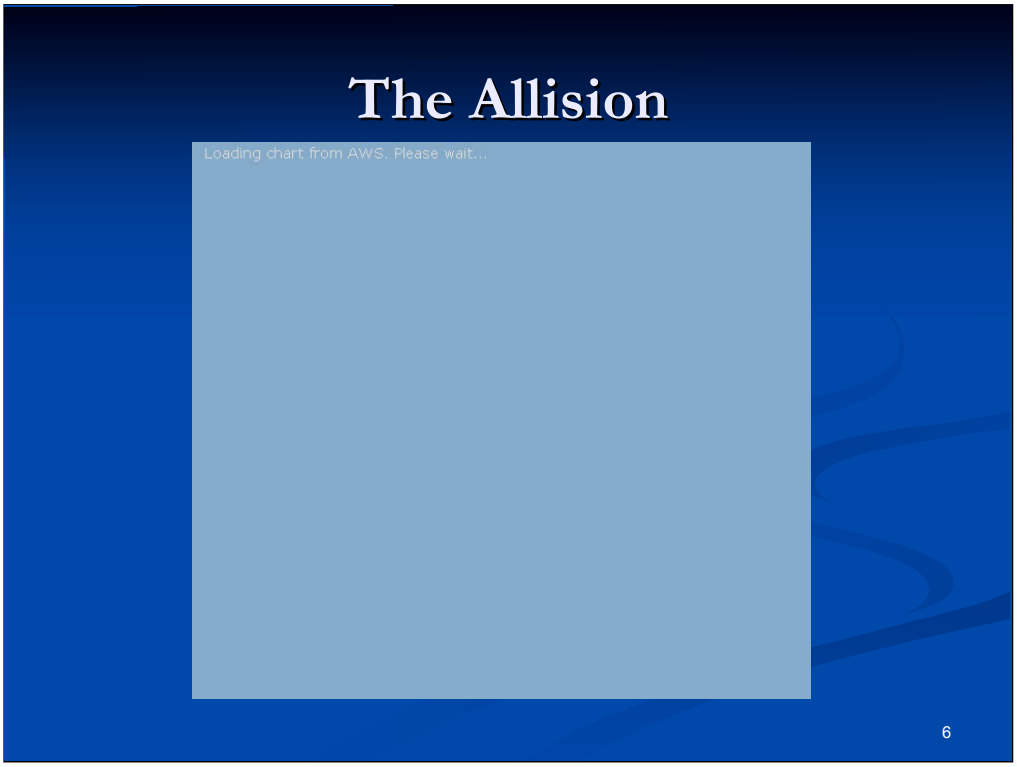
•Changing currents shifted oil in multiple directions.

•Resources were already mobilized when oil was located, and operations began immediately.

•Initial Response Chronology (from SITREP 1)

-0830U NOV06: SECTOR VTS NOTIFIES SCC OF ALLISION INCIDENT BETWEEN MERCHANT VESSEL AND BAY BRIDGE PILING. SECTOR ACTIVATES IMD PERSONNEL.

-0903U: SECTOR IMD PI TEAM EN ROUTE WITH



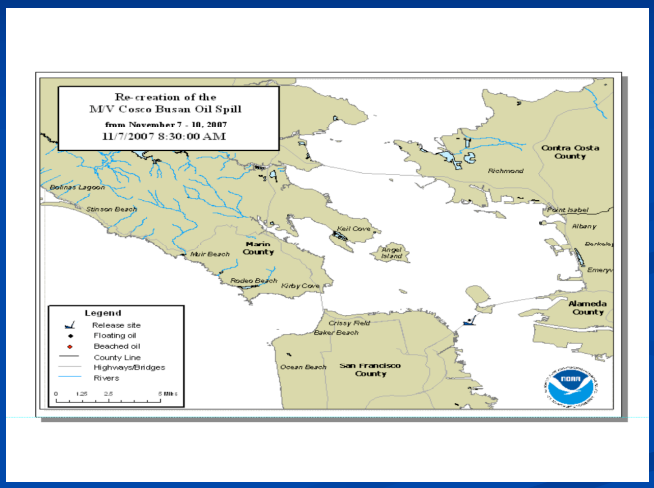
•This model trajectory video is an 80% solution that shows an approximation of how the oil will spread. The model is not precise, but is a general representation used to develop the response.
•The movement of the oil is mostly affected by the tides, which occur twice daily in San Francisco Bay.
•Shows dynamic environment.

*This photo was taken on November 11 at Oakland Berth 56. To give a perspective of the size of this gash, the vessel is 900 feet and the gash was 100 feet. Visibility at the time of the incident was 300 feet.

*Be prepared to answer “Why was the vessel not boomed at anchorage?” Currents make boom deployment ineffective.

*Entrainment occurs at currents greater than .7 kts, thus boom ineffective.

The Spill
(an estimate)



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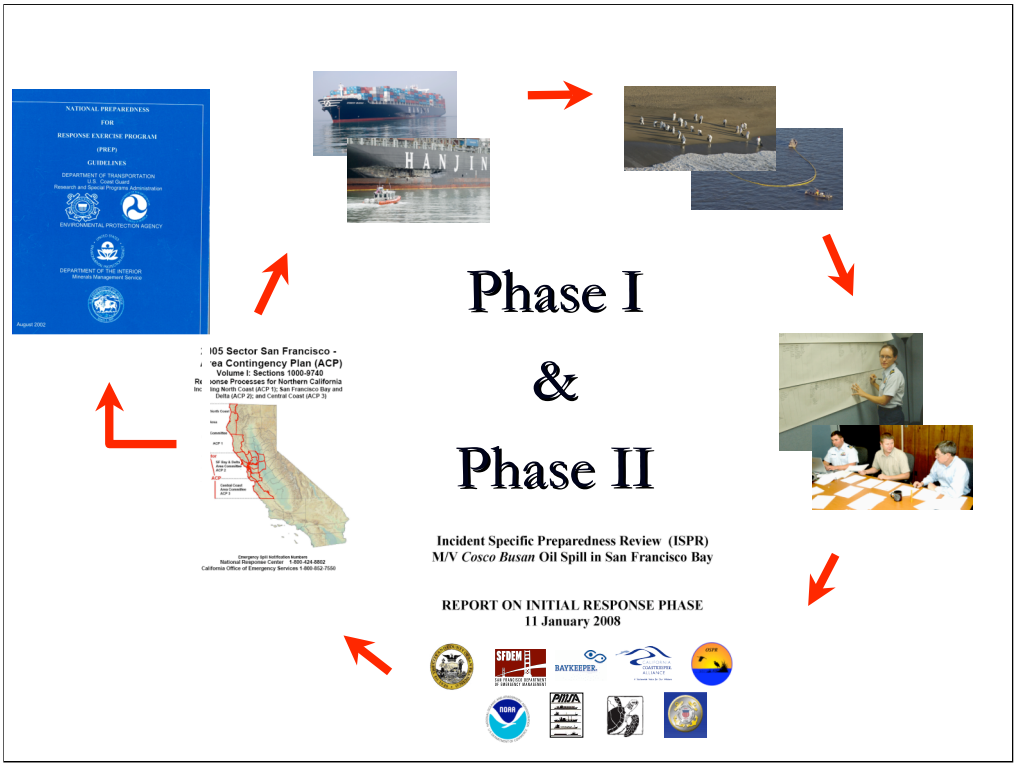
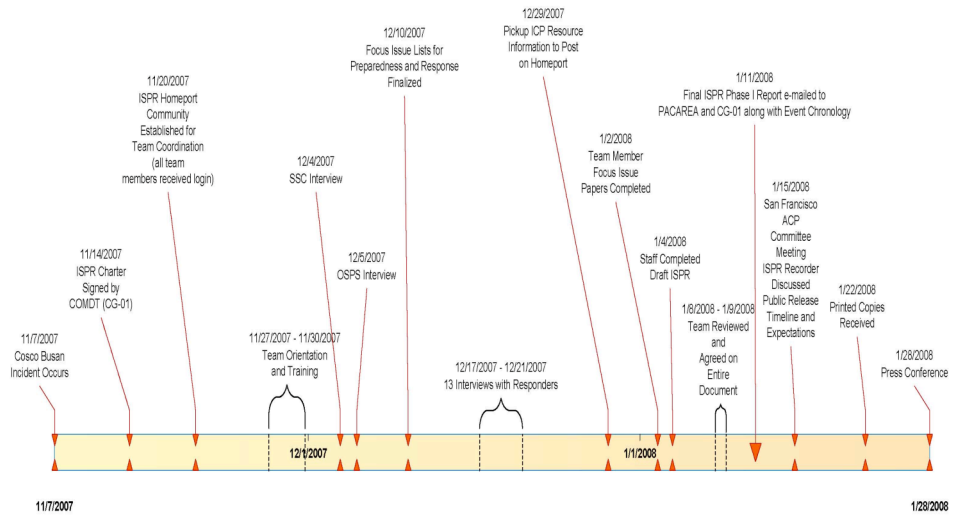

NATIONAL PREPAREDNESS
FOR
RESPONSE EXERCISE PROGRAM
(PREP)
GUIDELINES
DEPARTMENT OF TRANSPORTATION
U.S. Coast Guard
Research and Special Programs Administration
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF THE INTERIOR
Minerals Management Service
August 2002
HANJIN
Phase I
&
Phase II
Incident Specific Preparedness Review (ISPR)
M/V Cosco Busan Oil Spill in San Francisco Bay
REPORT ON INITIAL RESPONSE PHASE
11 January 2008
SFDEM
BAYKEEPER
PMTA
NOAA

Incident Specific Preparedness Review

- The goal of the ISPR is to document a thorough assessment of the Coast Guard preparedness processes.
- The primary mission of an **ISPR team is not to grade or critically evaluate the actual response efforts undertaken**, but instead, study the implementation and effectiveness of the ACP and its integration with vessel response plans, facility response plans and other relevant and applicable plans in effect at the federal, state, and local levels.


11/7/2007
Cosco Busan
Incident Occurs
11/14/2007
ISPR Charter
Signed by
COMDT (CG-01)
11/20/2007
ISPR Homeport
Community
Established for
Team Coordination
(all team
members received login)
11/27/2007 - 11/30/2007
Team Orientation
and Training
12/4/2007
SSC Interview
12/5/2007
OSPS Interview
12/10/2007
Focus Issue Lists for
Preparedness and Response
Finalized
12/17/2007 - 12/21/2007
13 Interviews with Responders
12/29/2007
Pickup ICP Resource
Information to Post
on Homeport
1/2/2008
Team Member
Focus Issue
Papers Completed
1/4/2008
Staff Completed
Draft ISPR
1/8/2008 - 1/9/2008
Team Reviewed
and
Agreed on
Entire
Document
1/11/2008
Final ISPR Phase I Report e-mailed to
PACAREA and CG-01 along with Event Chronology
1/15/2008
San Francisco
ACP
Committee
Meeting
ISPR Recorder
Discussed
Public Release
Timeline and
Expectations
1/22/2008
Printed Copies
Received
1/28/2008
Press Conference
12/1/2007
1/1/2008
11/7/2007
1/28/2008

Incident Specific Preparedness Review
M/V *Cosco Busan* Response

The ISPR Team

- US Coast Guard
- City of San Francisco
  (Department of Emergency Management)
- Pacific Merchant Shipping Association
- California Coastkeeper Alliance
- Pacific States/British Columbia Oil Spill Task Force
- State of California
  (Office of Oil Spill Prevention & Response)
- National Oceanic & Atmospheric Administration
  (Office of Response & Restoration)

Incident Specific Preparedness Review
M/V *Cosco Busan* Response

- Preparedness
  - Available Resources
  - Command Post & Logistics
  - Low Visibility Responses
  - Other Local Plans
  - ACP Committee Representation
  - **Priority Protection Area Identification**
  - Exercises (Federal, State, Local)
  - Ship-Specific Plans
  - CA OSRO Certification Program & Best Achievable Technologies
  - Training (all levels)
  - Volunteers (convergent & wildlife)
  - Bird Rescue

Indicates a "Top Ten" issue

Incident Specific Preparedness Review
M/V *Cosco Busan* Response

- Response
  - **Notifications** (by: OSPR, RP, OSROs, **USCG**, **CA-OES & Locals**)
  - **Media**
  - **Volunteers** (**training**, wildlife)
  - Bird Rescue
  - **Initial Response Actions** (OSROs, **USCG**, OSPR, RP)
  - **USCG Command Center & VTS**
  - **Spill Volume Quantification**
  - Remote Sensing
  - On-Water Recovery
  - Shoreline Cleanup Assessment Teams (SCAT)

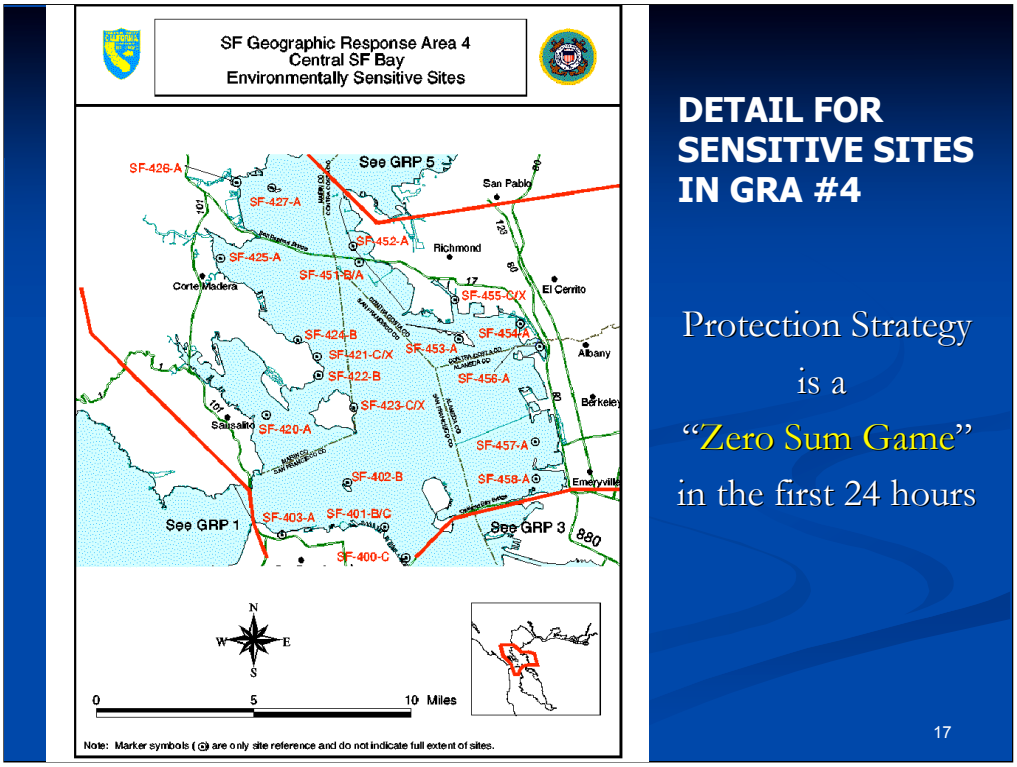
Indicates a "Top Ten" issue

Incident Specific Preparedness Review
M/V *Cosco Busan* Response

- Response (continued)
  - Booming Stratagies
  - Trajectory Modeling & Analysis
  - Weather (as a factor)
  - Resource Management (used, available & not used)
  - Communications
  - Relocation of the Command Post
  - **Liaison Officer**
  - Non-Government Organizations

Indicates a "Top Ten" issue

This boom is specifically protecting the restored Crissy Field marsh sensitive site.
Be prepared to answer questions on boom strategy and boom maintenance.



This is an example GRA in SF Bay. Each dot with a number represents a different sensitive site. The letter following the number conveys protection priority. For example, near the Chevron Long Wharf in Richmond is Site 451 – B/A called "Castro Rocks". This site is a B priority for most of the year except during the spring months it is an A priority site because of harbor seal reproduction.

•This is a specialized vessel being used for boom deployment on the north side of Angel Island.
•Note the personal protective equipment and the hard and sorbent boom.

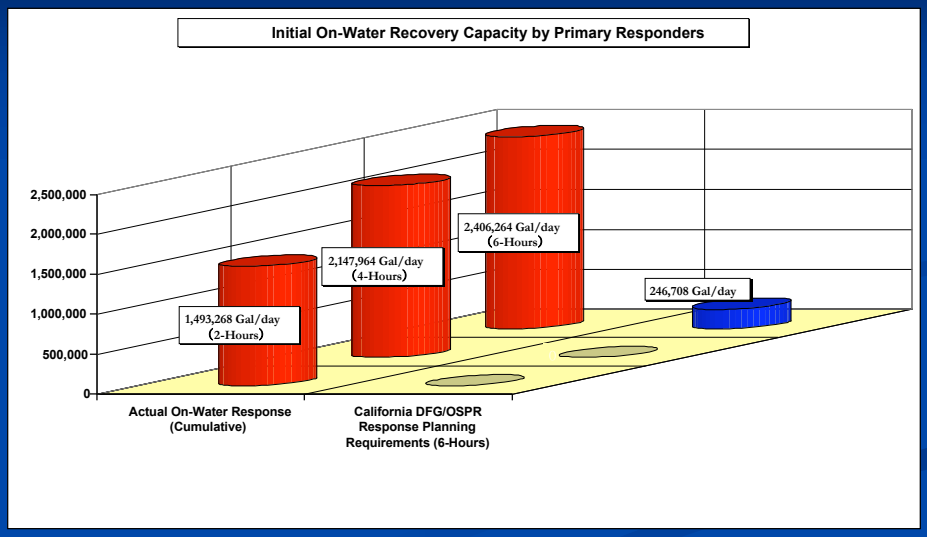
NTSB Report Conclusions

February 18, 2009

- #25 The failure of the U.S. Coast Guard and the California Department of Fish and Game's Office of Spill Prevention and Response to quickly quantify and relay an accurate estimate of the quantity of oil spilled to the Unified Command did not affect the overall on-water recovery effort in this accident.
- #26 The Federal on-scene coordinator failed to aggressively use the resources available to him to obtain timely and accurate information about the extent of the spill in order to fulfill his responsibilities.
- #27 Effective communication regarding response activities was established and maintained between the oil spill response organizations, the qualified individual, the U.S. Coast Guard, and the Unified Command on the day of the accident.
- #28 The designated oil spill response organizations' level of response to the Cosco Busan fuel oil spill was timely and effective.

On-water Recovery

Compared to response standards



Notes on next page

Over-the-Side Oil Recovery
North of Rodeo Beach

These photos show the National Park Service Cliff Rescue Team recovering approximately 100 pounds of oily waste from Marin County. No effort was spared to safely collect and properly dispose of the COSCO BUSAN bunker oil.

*Should be familiar with circumtances leading to OPERATION SPIDERMAN.

These are professional workers directed by supervisors executing highly detailed cleanup operations on Rodeo Beach.

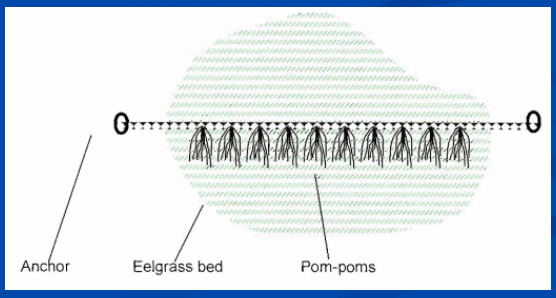
Sift box shows the care that was taken in cleaning the beaches. Point out the cone-shaped piles in the background showing where they have already sifted.

This hotwash operation took place at the south side of Berkeley Marina. This hotwash technique was used at this site at the recommendation of Incident Command Post Environmental Unit scientists. It's important to note that this technique is not done for cosmetic purposes, nor is it a technique that is appropriate for every site.

This photo was taken at Angel Island.


DIGGING FOR BURIED OIL

Submerged Oil Surveys



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The first photo shows the boat-based pom-poms towed in 3 sites in the East Bay that had moderate to heavy shoreline oiling.

The second photo shows passive-anchored pom-poms in 6 eel grass beds known to be used by herring.

Rapid assessment for the presence/absence of oil

The survey sites were areas near herring spawning grounds and areas likely to contain submerged oil.

Two types of screening methods were used:

- Passive-anchored pom-poms in 6 eel grass beds known to be used by herring
- Boat-based pom-poms towed in 3 sites in the East Bay that had moderate to heavy shoreline oiling.

No oil observed on pom-poms in either the passive-anchor method or the boat-based method.

Wildlife rehabilitation operations took place at the Oiled Wildlife Care Network in Cordelia.

(Will discuss actual volunteer aspect of OWCN later in presentation.)

Left to Right: CAPT Uberti; Chief Steve Edinger, DFG Assistant Chief; Senator Carole Migden, 3rd District Ca. State Senate; Governor Swarzenegger; Rear Admiral Craig Bone, Commander Coast Guard Eleventh District; Assemblyman Mark Leno.

For this incident, there was concern at the highest levels.

High Media Interest

Not to mention:

- 7 federal investigations/reviews
- 2 state investigations/reviews


Using hair to collect oil


CLOSED
OIL SPILL
WATER UNSAFE
AREA
CLOSED
OIL SPILL
Parking Lot
BEACH
CLOSED
"TOXIC OIL"
OIL SPILL
AREA CLOSED
EAST BAY REGIONAL PARK DISTRICT
National Park Service
AREA CLOSED
DO NOT
ENTER
HAZARDOUS
CONTAMINANTS
IN WATER
36 CFR 1.5(A)(1)

•Here is an outer-coast beach cleanup operation.
•The numerous workers you see here are pre-trained certified personnel.
•You can see that they are conducting a systematic clean-up operation and are wearing the proper personal protective gear.
•There are guidelines for the proper disposal of the protective gear and the waste which were closely followed throughout the cleanup operations.


Shoreline Cleanup Assessment Team

Cosco Busan Clean-up Phases

Phase 1 – Gross Oil Removal

Phase 2 – Removal to the Lowest Practical Level

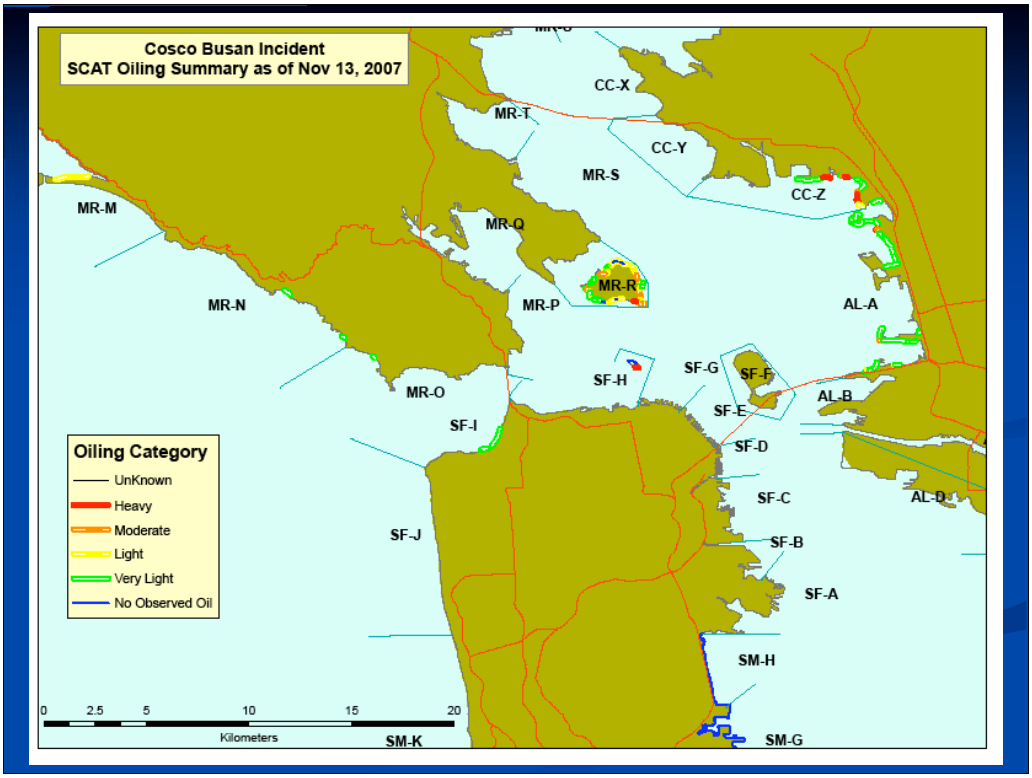
- Clean-up until "no oil observed" / "no further treatment"

Phase 3 – Maintenance & Monitoring for re-oiling

- Teams monitor segments on predetermined schedule
- Operations conducts cleanup as needed
- Determine if segment meets cleanup endpoints

Phase 4 – Natural Weathering

- Concludes with Final Inspection & Sign-Off Inspection of each previously oiled segment by multi-agency teams including land owner/manager.


Cosco Busan Incident
SCAT Oiling Summary as of Nov 13, 2007
CC-X
MR-T
CC-Y
MR-S
CC-Z
MR-M
MR-Q
MR-R
MR-N
MR-P
AL-A
SF-G
SF-F
SF-H
MR-O
AL-B
SF-E
SF-I
SF-D
Oiling Category
UnKnown
Heavy
Moderate
Light
Very Light
No Observed Oil
SF-C
AL-D
SF-J
SF-B
SF-A
SM-H
0 2.5 5 10 15 20
Kilometers
SM-K
SM-G


Below End Point
<10 % Coat

M/V Cosco Busan

Segment Inspection Report – Phase IV Final Sign Off

Segment ID: SF J#1

SCAT Team Members (4)

Name		Signature
CHARLIM DUEG	FOSC rep	
CRAIG HAFFNER	SOSC rep	
G. MACDONALD	RP rep	

Date of Survey: 3.19.2008

Time of Survey: 14.50 – 15.30

Tide Stage: <2.5 ft

Weather: SUNNY

Inspection Completed Along Entire Segment? (YES) / NO

Endpoint Criteria / Inspection Team Comments:

Sutra Baths & Cliff House — meets endpoints.

Trace of Non Cosco & Cosco oil <<1%.

Is any treatment or further action required? (circle one)

YES – define below specific treatment action(s) and specific locations within the segment where required. Provide sketches, maps GPS coordinates to OPs.

(No) – each UC rep sign appropriate signature box above.

Landowner Comments:

land owner/manager comment box

I have read this form and been given the opportunity to comment:

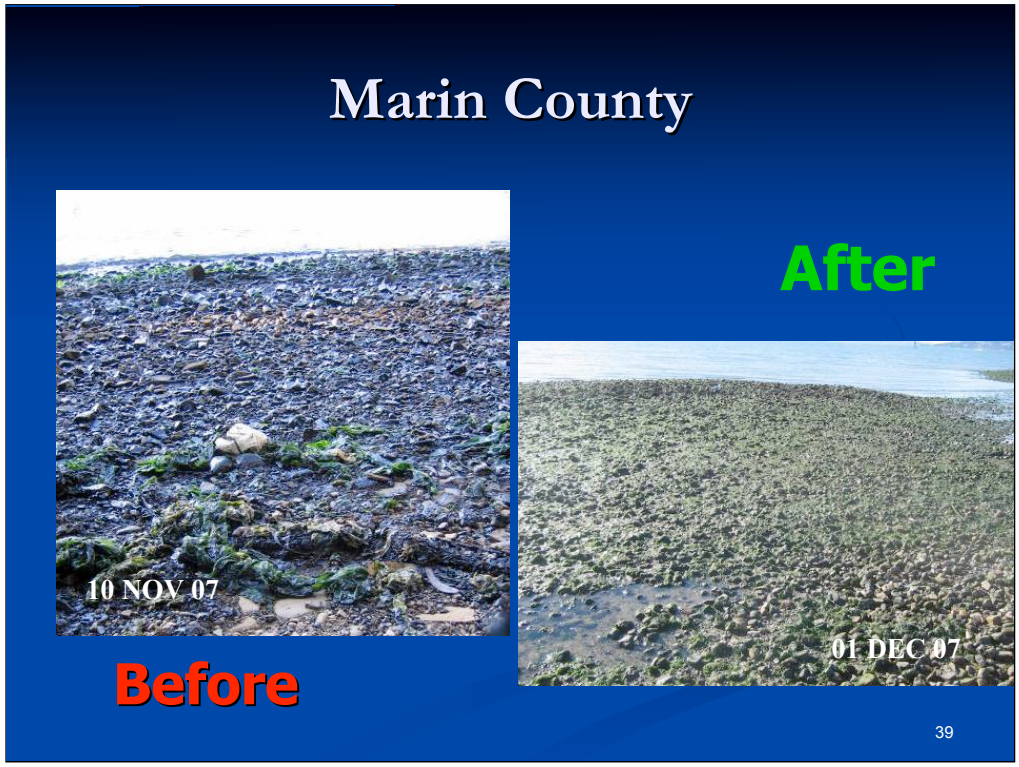
Signature/Agency: KRISTEN WARD, NPS

FOSC: _____ SOSC: _____ RP: _____

Shoreline Inspection Report (SIR)

UC Reps signatures

"An NFT with a small amount of oil that was below the end-point criteria"



These photos are from the Tiburon Penninsula

These are before and after photos of Angel Island.

These photos were taken at Shimada Friendship Park in Contra Costa County.

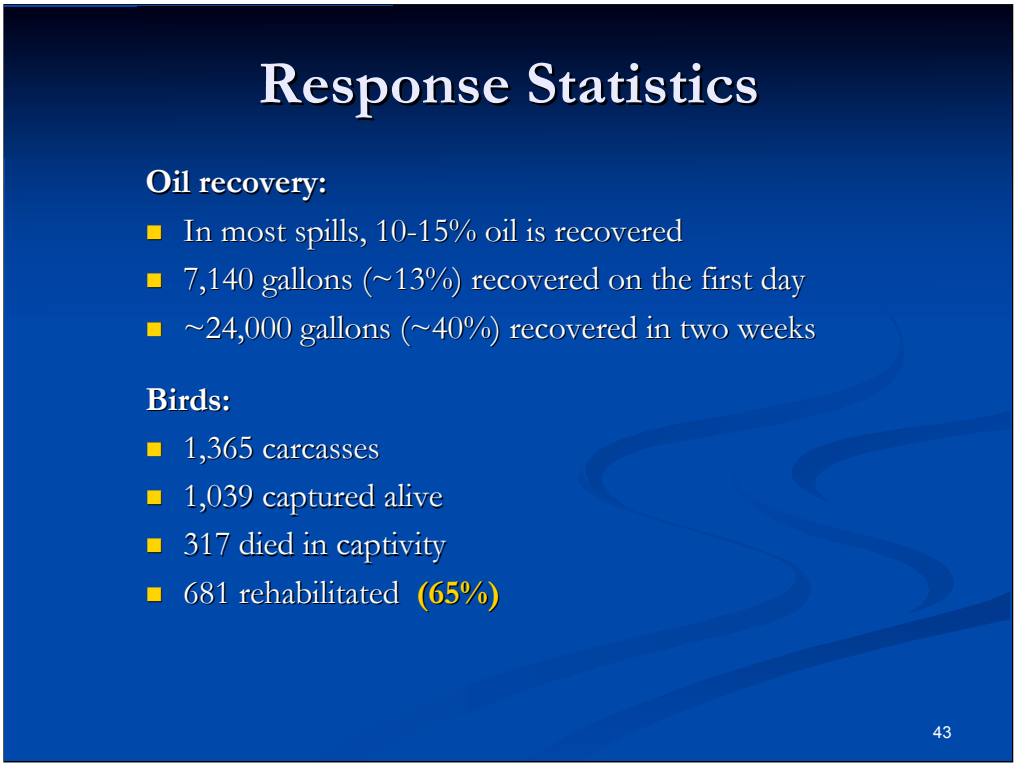
Response Statistics

People:

- 40 Federal, State & Local agencies involved
- 1,400 trained response professionals
- 250,000 field contractor staff hours
- 2,275 volunteers trained
- 1,007 volunteer days deployed

Equipment:

- 13 skimming vessels
- 20 fishing boats
- 38,200 feet of boom deployed



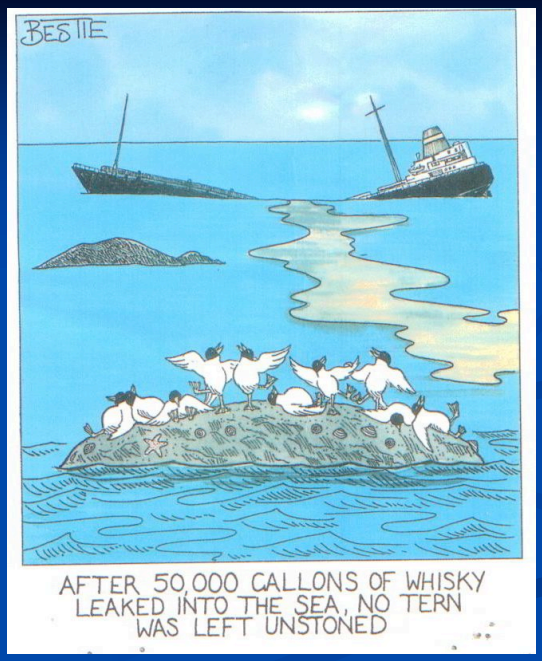
Volunteer costs – training, supervision, scheduling, equipment, etc.

Perspective…

- What was spilled?
  - How much?
- What will it hit?

& when it hits something…

- Why do we care?

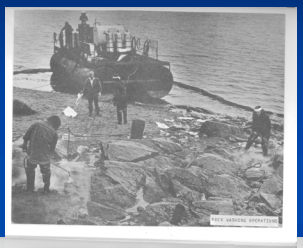


Recommendations

- Special Team Support:
  - "Immediately request presence of USCG Strike Force personnel."
- Public Affairs Support:
  - "Request the District provide PIO personnel on scene"
- Volunteers:
  - "Carefully evaluate the advantages and disadvantages of utilizing a volunteer force"
- Improve Training and Experience:
  - "High priority should be given to career patterns for COTP assignment for young officers"
- Documentation & Information Flow:
  - "Utilize a tape recorder to record each days activities"

T/V *Tomano*: July 22, 1972

Hussey Sound, Maine



Applicable Recommendations

- Priority Protection Areas
  - Develop initial protection priorities based on available resources in the first 6 to 12 hours of the incident
  - Develop clear ranking methods for priority area identification
- Notification
  - Examine notification lists and methodologies
- Public Outreach
  - Identify internet outreach media (wed sites, etc.) and methodologies
- Liaison
  - Identify & train local resources as Liaison Officers
- Protection Strategies
  - Continue to develop and test key protection strategies
- Volunteers
  - Develop appropriate protocols for coordinating expectations and activities for volunteers


Questions?
HANJIN